

## Contractors Assured Equipment Ground Conductor Program

### Summary

*OSHA requires ground fault protection on all construction sites. Contractors are required to provide either ground fault circuit interrupters on construction sites for receptacle outlets in use and not part of the permanent wiring, or they must implement an assured equipment grounding conductor program (AEGCP) which covers all cord sets, receptacles which are not part of the permanent wiring, and all equipment and tools connected by cord and plug which are available to or used by workers. To assure maximum job site protection contractors are encouraged to provide both. This Data Sheet focuses on the requirements of the AEGCP.*

### Assured Equipment Ground Conductor Programs (AEGCP)

The OSHA requirements for ground fault circuit interrupter protection on all construction sites are mandatory. The wording of the standard is such that all contractors on a construction site using electrical equipment are affected. The standard actually refers to “**employers**”, making each contractor responsible for the safety of their own personnel. Contractors have a choice of two options. They must either provide Ground Fault Circuit Interrupters (GFCIs) on all construction sites for receptacle outlets in use and not part of the permanent wiring, or they must implement a **scheduled** and **recorded** assured equipment grounding conductor program (AEGCP).

### Minimum Requirements

The AEGCP covers all cord sets and receptacles that are not part of the permanent wiring, and all equipment connected by cord and plug which are available to or used by workers. The program must contain the following **minimum** components:

1. **Written** - The program must be in writing. The program is to be a written document that includes the specific procedures adopted and implemented by the contractor. It must be available at the job site for inspection and copying by regulatory compliance officers and any affected worker /employee.
2. **Competency assured** - There must be at least one competent person assigned to implement and be responsible for the program.
3. **Inspection** - Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord and plug – (except cord sets and receptacles which are fixed and not exposed to damage) – must be **visually** inspected before each day’s use. They must be checked for signs of external defects or damage, including deformed or missing pins /plug prongs or insulation damage. They must also be checked for external indications of internal damage.
  - Plugs should be of the heavy duty type and approved for use in damp conditions.
  - Cords can only be used in continuous lengths without splices.
  - When different voltages, frequencies, or types of current (ac or dc) are supplied, receptacle and plug configurations should be designed so that they are NOT interchangeable.
  - Equipment found to be damaged or defective must not be used until repaired. They should be tagged as unusable before removal from the construction site.
4. **Testing** - All equipment grounding conductors must be tested to assure **electrical continuity**. Each receptacle and attachment cap or plug must also be tested for its correct attachment on all cord sets and receptacles not part of the permanent wiring, and on cords and plugs connected to equipment required to be grounded. The testing also ensures that the ground conductor is **connected to the proper terminal**.

All required tests should be performed by competent person(s):

- (a) Before first use

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- (b) Before the equipment is returned to service following any repairs
- (c) Before the equipment is used after any incident which can be reasonably suspected to have caused damage. Example: After a cord has been run over by a piece of equipment.
- (d) At intervals not to exceed three months. [Cord sets and receptacles that are fixed and not exposed to damage are to be tested at least every 6 months.]

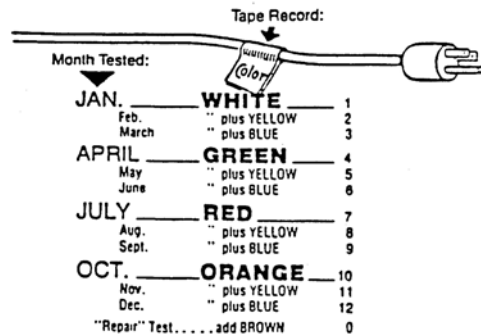
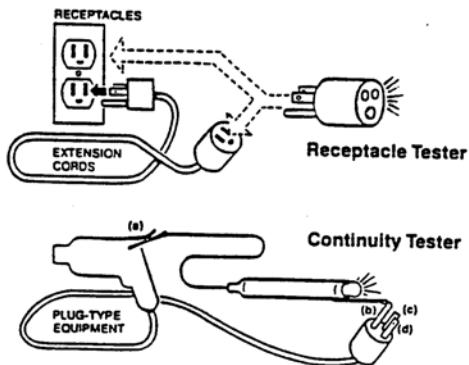
**Note:** The National Electrical Code (NEC) requirements that directly affect workers in construction have been placed in the text of the OSHA standard. They need not be consulted separately.

5. **Recordkeeping** - The tests required by the AEGCP must be recorded. The record must:
  - Include and identify each receptacle, cord set, cord-and-plug-connected piece of equipment that passed the test.
  - The date of the test and the interval for which it was tested.
  - Be kept up to date by means of logs, using color coding or other effective means.
  - Must be available on the job-site for inspection by OSHA or affected employees.
6. **Restricted equipment** - The contractor should prohibit the use of any equipment that does not meet the requirements of the AEGCP.
  - Note: The standard requires that a ground fault circuit interrupter must be provided with a test circuit that will allow for periodic, convenient testing of the ability of the device to trip in response to a ground fault. This applies to all GFCI equipped tools and equipment.

**Related Information:**

**Receptacle tester** plugs in to show if terminals are correctly connected to ground, and if wiring is continuous - (without breaks).

**Test Record Color Coding** – shows how wiring is labeled and the pattern that indicates the month tested.



**Continuity tester** checks if ground is continuous from metal frame (a) through cord to 3<sup>rd</sup> prong (b). Touching the tester contact to © then (d) prongs detects possible ground faults.

1. *Harleysville Loss Control Data Sheet LC-C 23 – Ground Fault Protection.*
2. *OSHA Construction Industry Standards 29 CFR 1926/1910, Subpart K (1926.400-408; 29 CFR 1926.32(f) – Competent person requirement*

*The information and suggestions contained in this data sheet have been developed from sources believed to be reliable. However, we accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations.*

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